

REMARKS

Applicants request reconsideration of the application as amended. Claims 1, 2, 4 to 6 and 12 to 14 are pending. Claim 3 has been cancelled. Claims 7 to 11 are withdrawn after a restriction requirement. Claims 12 to 14 are newly presented, with support in at least paragraphs [0039] and [0040] of the specification.

Paragraph [0062] of the specification has been amended to correct reference to curves 10A and 20A in FIG. 2. These reference numerals were inadvertently switched in the original specification text.

Claim 1 has been amended to incorporate the limitation from claim 3.

In the Office Action, the Examiner rejected claims 1, 2, 5 and 6 under 35 USC 102(b) as anticipated by the disclosure of GB 1,341,693 (Macdonald). Applicant traverses the rejection for the claims as amended. Macdonald does not show a method for suppressing an explosion in a fuel tank by installing into the tank a reticulated polyurethane foam having a density less than 1.0 pounds per cubic foot [16 kg/m^3], and having a volume electrical resistivity of less than 10^{12} ohm-cm at 70°F [21.1°C]. Claim 1 as amended thus distinguishes from Macdonald. The anticipation rejection should be withdrawn.

Claims 3 and 4 were rejected under 35 USC 103(a) as obvious over the disclosure of Macdonald in view of US 5,028,355 (Cope). Applicant traverses the rejection as to the claims as amended.

As stated above, Macdonald does not show a method for suppressing explosions using reticulated foams that have antistatic properties. While there is a part overlap between Macdonald's foam density range (12 to 30 Kg/m^3) versus less than 1 pcf (16 Kg/m^3) as Applicants claim, Macdonald does not focus on reducing weight (and density) of the foam installed the tank. The major portion of Macdonald's density range is well above Applicants' claimed density. Lower density and cost reduction are key to extending use of the explosion suppressing foams to the commercial aircraft industry.

Cope seeks to improve the explosion suppressing foams for fuel tank use by including specific charge transfer agents, such as tetracyanoethylene (TCNE) and picric acid, two very hazardous materials that are dangerous to handle. TCNE is very toxic and picric acid and its derivatives are explosive. Cope's example foams all have densities above the desired lower density that is claimed by Applicants. Cope's lowest reported density is 1.2 pounds per cubic foot (or 19.2 Kg/m³), which is above the 1.0 pounds per cubic foot and lower range claimed. There is no suggestion in Cope to prepare lower density foams, and skilled persons who might attempt to combine Cope with Macdonald would not be directed to lower density foams as claimed by the Applicants. The combination of lower density and volume electrical resistivity in reticulated foams used to suppress explosions is not taught by Cope or Macdonald, whether alone or in combination. Accordingly, claim 1 and all claims depending from claim 1 should be allowed.

New claims 12 to 14 further distinguish from the attempted combination of Macdonald and Cope. These claims are directed to methods of controlling explosions in fuel tanks where the reticulated foam forming composition includes anti-static agents that are much safer to use. The resulting foams meet the volume electrical resistivity claimed without hazardous materials such as used by Cope. These claims should be allowed.

No fee is believed due for this Amendment. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 00124-01080-US. A duplicate copy of this paper is enclosed.

Dated: October 10, 2006

Respectfully submitted,

By 
Patricia Smink Rogowski

Registration No.: 33,791

CONNOLLY BOVE LODGE & HUTZ LLP

Correspondence Customer Number: 23416

(302) 658-9141

Attorney for Applicants